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STATE COMMITTEE  
FOR INVENTIONS AND DISCOVERIES

(12) **ABSTRACT OF INVENTION**

(71) Applicant:  
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(54) METHOD OF REGENERATION OF SPENT ETCHING SOLUTION CONTAINING FERROUS AND FERRIC CHLORIDE AND COPPER

(57) Сущность изобретения: восстановление травильной способности отработанного раствора, содержащего хлористое и хлорное железо и медь, осуществляют следующим образом. Проводят цементацию меди при избытке железного порошка до получения в растворе хлористого железа 4,3

моль/л, отделяют образовавшийся осадок железо-медь, а в раствор добавляют соляную кислоту до концентрации 1-2,48 моль/л, выкристаллизовывают осадок хлористого железа, отделяют этот осадок от раствора, а раствор подают на окисление для образования хлорного железа, 2 ил. 1 табл. (л)

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File 351:Derwent WPI 1963-2005/UD,UM &UP=200524

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Regenerating spent etching soln. contg. copper and ferrous and ferric chloride(s) - includes precipitating copper with excess iron@ powder

Patent Assignee: UNIV KHARK (UYKH )

Inventor: ABMANOVA N A; GOROBETS S D; LARIN V I

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1798383	A1	19930228	SU 4879438	A	19901101	199419 B

Priority Applications (No Type Date): SU 4879438 A 19901101

Patent Details:

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SU 1798383	A1	4	C23G-001/36	

Abstract (Basic): SU 1798383 A

The solns. are regenerated by precipitating the Cu with an excess of Fe powder, sepg. the Fe-Cu residue formed and oxidising the ferrous chloride to the ferric state with Cl. In order to achieve the stated aims, the Cu is pptd. to produce a soln. contg. ferrous chloride at a 4.3 moles/litre concn. Before the said soln. is oxidised, the excess ferrous chloride is removed by adding HCl to produce a concn. of 1-2.48 moles/litre, the ferrous chloride is allowed to crystallise out and the said ferrous is sepd. by decanting.

Referring to the drawing, 1 is the both with the spent etching soln., 2 is the reactor for Cu pptn., 3 is a reactor for collecting the Fe-Cu residue, 4 is a reactor for crystallising out the ferrous chloride and 5 is the supply of conc. HCl.

USE/ADVANTAGE - Is used in the radio and electronics. The etching soln. balance is maintained before and after regeneration by avoiding the formation of excess ferric chloride.

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Title Terms: REGENERATE; SPENT; ETCH; SOLUTION; CONTAIN; COPPER; FERROUS; FERRIC; CHLORIDE; PRECIPITATION; COPPER; EXCESS; IRON; POWDER

Derwent Class: L03; M14; V04; X25

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Derwent Registry Numbers: 1704-U; 1939-P

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